

CLAIMS

1. A hand-held domestic spraying product comprising a reservoir holding a liquid composition, a nozzle means for producing a spray from said liquid composition, an electrically powered pump for creating the force required to move the liquid composition from the reservoir towards the nozzle, and a control means for activating the electrically powered pump, characterised in that the electrically powered pump is a MEMS pump.
5
2. A product according to claim 1, wherein the MEMS pump acts as an air pump resulting in an air pressure modification adjacent to the liquid composition and providing the force required to move the liquid composition from the reservoir towards the nozzle means
15
3. A product according to claim 2, wherein the liquid composition has a resistivity of less than 10^4 ohm.cm.
20
4. A product according to claim 3, wherein the MEMS pump is a diaphragm pump that is electrostatically driven.
5. A product according to any of claims 2 to 4, wherein the MEMS pump acts as air compressor, increasing the air pressure adjacent to the liquid composition.
25
6. A product according to any of claims 2 to 4, wherein the MEMS pump acts to create an air stream that serves to draw the liquid composition from the reservoir using a venturi effect.
30

7. A product according to any of the preceding claims, comprising a pulse reduction means.
8. A product according to any of the preceding claims, comprising a parallel array of MEMS pumps.
9. A product according to any of the preceding claims, comprising an array of MEMS pumps in series.
10. 10. A product according to claim 8 or 9, comprising a parallel array of MEMS pumps with non-synchronous pulse frequencies.
11. A product according to any of claims 2 to 10, comprising a buffer chamber for receiving the air from the MEMS pump.
12. A product according to claim 11, wherein the buffer chamber has a volume of at least half that of the reservoir containing the liquid composition.
13. A product according to any of the preceding claims, comprising a transfer conduit for transfer of the liquid composition from the reservoir towards the nozzle means.
14. A product according to claim 13, wherein the transfer conduit comprises one or more valves.